

Claims 8-17 - Claims 9-17 are dependent upon claim 8. Claim 8 is drawn to a marking method comprising the steps of:

emitting a laser beam;

deflecting said emitted laser beam in accordance with a frequency of an X applied electrical signal and a frequency of a Y applied electrical signal;

separating said deflected laser beam into a plurality of laser beams;

scanning a first of said plurality of laser beams onto a substrate; and

scanning a second of said plurality of laser beams onto said substrate.

Claims 18-28 - Claims 19-28 are dependent upon claim 18. Claim 18 is drawn to a marking apparatus comprising:

a laser oscillator mechanism adapted to emit a laser beam;

an acoustic deflector mechanism adapted to deflect said emitted laser beam in accordance with a frequency of an X applied electrical signal and a frequency of a Y applied electrical signal;

a separator mechanism adapted to separate said deflected laser beam into a plurality of laser beams;

a first galvanometer scanner mechanism adapted to scan a first of said plurality of laser beams onto a substrate; and

a second galvanometer scanner mechanism adapted to scan a second of said plurality of laser beams onto said substrate.

Paragraph [0021] of the specification as originally filed provides that:

A laser beam 2 emitted from a laser oscillator 1 is adjusted in predetermined beam diameter and collimation and enters an X acoustooptic deflector 3 as shown in FIG. 4. The laser beam entering the X acoustooptic deflector 3 exits as a laser beam 4 from the unit 3 deflected in accordance with the frequency of an X applied electrical signal 14. It is a matter of course that the laser beam 4 is not divided into a plurality of beams but its deflection angles are changed corresponding to a time-series change of the frequency of the X applied electrical signal 14.

Paragraph [0022] of the specification as originally filed provides that:

Then, the laser beam 4 enters the Y acoustooptic deflecting unit 5 and exits from the unit 5 as a laser beam 6 deflected in accordance with the frequency of the Y applied electrical signal 15. In this case, by setting the above mentioned X acoustooptic deflector 3 and the Y acoustooptic deflector 5 so as to be orthogonal each other and swinging the laser beam 4 deflected in the horizontal direction in the vertical direction by the Y acoustooptic deflector 5, it is possible to two-dimensionally change angles of the laser beam 6. That is, by controlling the X applied electrical signal 14 and the Y applied electrical signal 15 with respect to the acoustooptic deflector 3 and 5. It is possible to constitute an optional character or figure with dots formed in order. As a result, as shown in FIG. 5, it is possible to obtain a two-dimensional code very accurate in positioning of dots.

JP11271983 - JP11271983 arguably teaches the presence of a laser light source 5 and exposure shutter devices 6 and 7 (JP11271983 at Abstract).

Yet, the Office Action admits that JP11271983 fails to disclose, teach or suggest the presence of acoustooptical deflectors (Office Action at page 3).

As a result, JP11271983 fails to disclose, teach or suggest:

- deflecting said emitted laser beam in accordance with a frequency of an X applied electrical signal and a frequency of a Y applied electrical signal;

- separating said deflected laser beam into a plurality of laser beams;
- scanning a first of said plurality of laser beams onto a substrate; and
- scanning a second of said plurality of laser beams onto said substrate.

Kim - Kim arguably teaches an acoustooptic deflector 41 (Kim at Figure 3). Kim arguably teaches that *the laser beam 80*, which has been generated by the laser source part 30 and received by the acoustooptic deflector 41, *is deflected by the deflector 41* as it is adjusted in its deflection angle in accordance with *the frequency of the ultrasonic wave of the ultrasonic generator 110* (Kim at Figures 5A, 5B, column 7, lines 33-38).

However, Kim fails to disclose, teach or suggest deflecting the laser beam 80 in accordance with *a frequency of an X applied electrical signal and a frequency of a Y applied electrical signal*.

Sandstrom - Sandstrom arguably teaches the presence of spatial light modulators.

Nevertheless, Sandstrom fails to disclose, teach or suggest deflecting a laser beam in accordance with a frequency of an X applied electrical signal and a frequency of a Y applied electrical signal.

Ngoi - Ngoi arguably teaches the presence of four acoustooptic deflectors 16, 16A, 18 and 20 (Ngoi at Figures 4 and 5). Ngoi arguably teaches the presence of three acoustooptic deflectors 16B, 18 and 20 (Ngoi at Figures 6 and 7).

As a result, JP11271983, Kim, Sandstrom, and Ngoi, either individually or as a whole, fail to disclose teach or suggest all features of the claimed invention.

Withdrawal of this rejection and allowance of the claims is respectfully requested.

Conclusion

For the foregoing reasons, all the claims now pending in the present application are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of the amendments and remarks is courteously solicited.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone Brian K. Dutton, Reg. No. 47,255, at 202-955-8753.

If any fee is required or any overpayment made, the Commissioner is hereby authorized to charge the fee or credit the overpayment to Deposit Account # 18-0013.

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Respectfully submitted,

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